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**REMARKS**Summary of Claim Amendments

Claims 32, 43, 46, 48, 54, 55, 66, and 72 are amended with this response. Claims 37, 38, 42, 47, 53, 56, 58, 64, and 70 are cancelled, without prejudice, with this response. Claims 1-31 were previously cancelled. Thus, the pending claims to be considered by the Office are Claims 32-36, 39-41, 43-46, 48-52, 54, 55, 57, 59-63, 65-69, and 71-72.

Summary of the Office Action

The Office Action dated May 16, 2007, included the following rejections and objections:

1. Claims 66 and 72 are rejected under 35 U.S.C. 112, second paragraph, for failing to particularly point out and distinctly claims the subject matter which Applicant regards as the invention.
2. Claims 32-38, 46-66, and 69-70 are rejected under U.S.C. 103(a) as being unpatentable over WO 03/014462 to CRENSHAW et al., in view of US Patent 5,932,317 to KERR, US Patent 5,332,457 to KATOH et al., and optionally further in view of US Patent Application Publication No. 2003/0096079 to MESSINA et al.
3. Claims 39-43 and 67-68 are rejected under U.S.C. 103(a) as being unpatentable over WO 03/014462 to CRENSHAW et al., in view of US Patent 5,932,317 to KERR, US Patent 5,332,457 to KATOH et al., and optionally further in view of US Patent Application Publication No. 2003/0096079 to MESSINA et al., and in further view of US Patent 6,296,733 to HUDKINS et al.

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4. Claims 42-43 are rejected under U.S.C. 103(a) as being unpatentable over WO 03/014462 to CRENSHAW et al., in view of US Patent 5,932,317 to KERR, US Patent 5,332,457 to KATOH et al., and optionally further in view of US Patent Application Publication No. 2003/0096079 to MESSINA et al., and in further view of US Patent 6,296,733 to HUDKINS et al., and in further view of US Patent 6,316,075 to DESAI et al.
5. Claim 44 is rejected under U.S.C. 103(a) as being unpatentable over WO 03/014462 to CRENSHAW et al., in view of US Patent 5,932,317 to KERR, US Patent 5,332,457 to KATOH et al., and optionally further in view of US Patent Application Publication No. 2003/0096079 to MESSINA et al., and in further view of US Patent 6,296,733 to HUDKINS et al., and in further view of US Patent 4,647,790 to WING et al.
6. Claim 45 is rejected under U.S.C. 103(a) as being unpatentable over WO 03/014462 to CRENSHAW et al., in view of US Patent 5,932,317 to KERR, US Patent 5,332,457 to KATOH et al., and optionally further in view of US Patent Application Publication No. 2003/0096079 to MESSINA et al., and in further view of US Patent 6,296,733 to HUDKINS et al., and in further view of US Patent 4,647,790 to WING et al., and in further view of US Patent 4,400,414 to DeMOTT.
7. Claims 71-72 are rejected under U.S.C. 103(a) as being unpatentable over WO 03/014462 to CRENSHAW et al., in view of US Patent 5,932,317 to KERR, US Patent 5,332,457 to KATOH et al., and optionally further in view of US Patent Application Publication No. 2003/0096079 to MESSINA et al., and in further view of US Patent 5,800,664 to COVERT.

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Discussion of the Rejections**1. Claims 66 and 72 stand rejected under 35 U.S.C. 112, second paragraph.**

Claim 66 has been amended to clarify the intended scope of the claim. Justification for this amendment may be found, for example, on page 9, lines 10-11 of the specification. Claim 72 has been amended to depend from claim 71.

Applicants believe that these amendments are sufficient to clarify the intended scope of the claims, thus satisfying the requirements of the second paragraph of 35 USC 112. Accordingly, Applicants respectfully request the withdrawal of such rejection.

**2. Claims 32-38, 46-66, and 69-70 stand rejected as being unpatentable over CRENSHAW, in view of KERR, KATOH, and, optionally, MESSINA.**

Claim 32 is directed to a method of producing a mat with a tufted pile surface and an elastomer backing, where the method comprises the steps of (a) mixing elastomer crumbs and binder, (b) depositing the crumb/binder mixture to form a crumb/binder layer, (c) placing a textile surface element comprising tufts of yarn tufted into a tufted substrate on the crumb/binder layer to form a mat assembly, (d) pressing the mat assembly in a heated press having an inflatable diaphragm and a single heated platen, which includes a plurality of heated zones, said pressing step being used to set the binder, thereby consolidating the elastomer crumbs to form an elastomer backing having voids between the elastomer crumbs and bonding the textile surface element to the elastomer backing, wherein the mat assembly is pressed at a pressure from 2-8 p.s.i.g. and heated a maximum temperature of 200 °C or less to form an elastomer backing with a density in the range of 0.5 to 0.9 g/cm<sup>3</sup>.

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All other rejected claims depend, either directly or indirectly, from Claim 32 and, as such, include all of the limitations of Claim 32. (See MPEP 608.01(i), which states, in part: Claims in dependent form shall be construed to include all the limitations of the claim incorporated by reference into the dependent claim.)

Accordingly, the Office must consider all of the limitations of the claims in evaluating the patentability of a claim against the prior art. (See MPEP 2143.03, which states, in part: "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).)

One limitation of Claim 32 is that "the mat assembly [is pressed] in a heated press having an inflatable diaphragm and a single heated platen having a plurality of zones, a first zone being a low temperature zone and a second zone being a higher temperature zone." The Office acknowledges that the CRENSHAW reference fails to teach the use of a compression mold having an inflatable diaphragm and, therefore, turns to the teachings of KERR. KERR teaches "the vulcanization of rubber back, textile surfaced mats in a compression mold utilizing an inflatable diaphragm forces the longitudinal edges of the textile to embed deeper within the rubber" (Col. 1, lines 41-44). KERR provides no additional teachings of the details of such a vulcanization apparatus and, thus, fails to teach a vulcanization apparatus having a plurality of temperature zones.

Moreover, the KERR reference and the CRENSHAW reference are incapable of being combined, because the apparatus described by CRENSHAW is incapable of having an inflatable diaphragm. Specifically, the inflatable diaphragm is located in the area occupied by the second heated platen. Accordingly, Applicants submit that no *prima facie* case of obviousness exists with respect to this feature, based on the combined teachings of CRENSHAW and KERR.

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Another limitation of Claim 32 is that the elastomer backing has a density of 0.5-0.9 g/cm<sup>3</sup>. The Office acknowledges that the CRENSHAW (WO '462) reference fails to teach such a density, and, therefore, turns to the KATOH reference to overcome this deficiency. KATOH teaches that a finished carpet having a density of from 0.8 to 1.2 g/cm<sup>3</sup>, which results from the inclusion of inorganic expanded particles in the backing system. Inorganic expandable particles—such as Portland cement, mixed cement, alumina cement, and hydraulic gypsy powder—have different processing parameters and physical characteristics than vulcanized elastomer crumb (as used by CRENSHAW). Therefore, these particles and backing systems are not interchangeable with those used to create a rubber/binder mat backing. Accordingly, one skilled in the art would not expect, with a reasonable likelihood of success, that the proposed substitution of the low-density backing of KATOH into the mat of CRENSHAW would arrive at the claimed invention.

Another limitation of Claim 32 is that the elastomer backing had voids between the elastomer crumbs. The Office acknowledges that CRENSHAW is silent on having voids between the elastomer crumbs and, again, turns to KATOH for a teaching that voids are intrinsically formed in a water-based resin matrix during high-temperature heating. The Office also suggests that it would be obvious to one skilled in the art to create voids in a matrix resin forming a carpet of CRENSHAW because KATOH teaches the desirability of forming voids in a backing layer (i.e., a reduction in density and an excellent cushioning effect).

Alternatively, the Office suggests that it would have been obvious to form a porous backing, thereby naturally creating voids, in a resin binder matrix in forming a carpet of CRENSHAW, because MESSINA teaches forming a porous automotive carpet mat. Applicants respectfully traverse these conclusions.

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As best understood, the Office suggests that voids may be created in the CRENSHAW rubber crumb backing, because KATOH teaches the desirability of forming voids in a backing layer and the teaching that water-based resin matrices produce voids during high-temperature heating. CRENSHAW describes the elastomer-binding material as a matrix material that "includes a binder and a colorant" (para. [0019]). The binder material is preferably provided in fluid form (para. [0021]) and is activated at temperatures between 212 °F and 500 °F. The colorant material includes a barrier material (such as titanium dioxide particles), a dispersing agent, and, optionally, a colorant (para. [0025]).

KATOH teaches a carpet backing of a resin, water, and fillers. The amount of water used in these compositions is preferably 100 to 300 parts by weight per 100 weight of the resin solid content. Further, the fillers are preferably inorganic or expanded organic particles. The method of curing these compositions, such as in test example 1, uses different curing compositions, material characteristics, and physical parameters compared to curing a resin and rubber system.

MPEP 2143.02 states, in part: "The prior art can be modified or combined to reject claims as *prima facie* obvious as long as there is a reasonable expectation of success." Applicants submit that the curing compositions and processing conditions used to produce voids in the system of KATOH would not necessarily produce voids in the invention of CRENSHAW, which relies on entirely different backing materials. Accordingly, Applicants believe that no *prima facie* case of obviousness may be made with respect to the limitation of "an elastomer backing that includes voids between the elastomer crumbs", based on the combination of CRENSHAW and KATOH.

As to the combination of CRENSHAW with MESSINA, Applicants submit that the porous urethane backings described by MESSINA are not equivalent to "an elastomer backing that includes voids between the elastomer crumbs". The teachings of an open-cell, porous urethane backing would not

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lead one skilled in the art to modify the CRENSHAW reference to induce voids into a backing formed from rubber particles and a binder. Thus, because there is no reasonable likelihood of success in making the proposed combination or modification, Applicants submit that there is no *prima facie* case of obviousness with respect to the "elastomer backing having voids" limitation.

Having addressed the deficiencies of the various proposed combinations of CRENSHAW, KERR, KETOH, and/or MESSINA with respect to Claim 32, Applicants submit that no *prima facie* case of obviousness exists. Accordingly, Applicants respectfully request the withdrawal of such rejection.

In addition, MPEP 2143.03 states: If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Accordingly, Applicants respectfully request the withdrawal of the rejection of Claims 33-36, 46, 48-52, 54-55, 57, 59-63, 65-68, and 69.

**3. Claims 39-43 and 67-68 were rejected as being unpatentable over CRENSHAW in view of KERR, KATOH, and, optionally, MESSINA, in further view of HUDKINS.**

Applicants respectfully submit that the addition of HUDKINS does not cure all of the deficiencies of the previous combination of references. As but one example, HUDKINS teaches the use of multiple heated presses, rather than the use of multiple heated zones in a single heated platen. Regarding the use of thermoplastic materials, the present claims are directed to the use of thermoplastic materials as binders for elastomer particles, while the HUDKINS reference is directed to the production of a mat having integrated protrusions made of sheets of thermoplastic. HUDKINS fails to teach the use of thermoplastics in combination with particles or even its use as a binder. Accordingly, Applicants respectfully request the withdrawal of such rejection.

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**4. Claims 42-43 were rejected as being unpatentable over CRENSHAW in view of KERR, KATOH, and, optionally, MESSINA, in further view of HUDKINS and DESAI.**

Applicants respectfully believe that the addition of DESAI does not cure the deficiencies of the previous combination. Moreover, it is unclear to Applicant what teachings the DESAI reference is purported to provide, as none have been recited in the Office Action. Applicants note that the DESAI reference also teaches the use of heated platens above and below the assembly being produced, which is outside the scope of Claim 32, from which Claim 43 depends. Accordingly, Applicants respectfully request the withdrawal of such rejection.

**5. Claim 44 was rejected as being unpatentable over CRENSHAW in view of KERR, KATOH, and, optionally, MESSINA, in further view of HUDKINS and WING.**

Applicants respectfully believe that the addition of WING does not cure the deficiencies of the combination of CRENSHAW, KERR, KATOH, and/or MESSINA, and HUDKINS. Accordingly, Applicants respectfully request the withdrawal of such rejection.

**6. Claim 45 was rejected as being unpatentable over CRENSHAW in view of KERR, KATOH, and, optionally, MESSINA, in further view of HUDKINS, WING, and DeMOTT.**

Applicants respectfully believe that one looking for methods of applying elastomer crumb-backed coatings would not look to a reference directed to the application of aqueous soil-resistant coatings onto fabrics (as taught by DeMOTT). Accordingly, Applicants respectfully request the withdrawal of such rejection.



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7. Claims 71-72 were rejected as being unpatentable over CRENSHAW in view of KERR, KATOH, and, optionally, MESSINA, and in further view of COVERT.

Applicants respectfully believe that the addition of COVERT does not cure the deficiencies of the combination of CRENSHAW, KERR, KATOH, and/or MESSINA. Accordingly, Applicants respectfully request the withdrawal of such rejection.

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**CONCLUSION**

In view of the foregoing Amendments and Remarks, the Examiner is respectfully requested to withdraw the outstanding rejections and to pass the subject application to allowance. In the event that the Examiner believes that the claims would be allowable with minor changes, the Examiner is invited to telephone the undersigned to discuss an Examiner's Amendment.


**Fee Authorization:** In the event that there are additional fees associated with the submission of these papers, Applicants hereby authorize the Commissioner to withdraw those fees from Deposit Account No. 04-0500.

**Extension of Time:** This response is accompanied by a Petition for Extension of Time (three months). In the event that additional time is required to have the papers submitted herewith for the above-referenced application to be considered timely, Applicants hereby petition for any additional time required to make these papers timely and authorization is hereby granted to withdraw any additional fees necessary for this additional time from Deposit Account No. 04-0500.

Respectfully submitted,

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